

Chocolate chip cookie recipe:

makes 4 dozen.

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- 2 eggs
- 2 c. butter
- 2 tsp. vanilla
- 2 tsp. baking powder
- 1 c. milk
- 1 tsp. salt
- 2 bags chocolate chips

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I don't have enough chips to make 4 dozen cookies. So, it's my limiting ingredient. It will control how many cookies I can make.

Original Recipe

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2 eggs

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2 tsp. vanilla

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2 bags chocolate chips

Original Recipe

So, how do I modify this recipe for
2/3 bag of chips?

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How to modify a recipe: Find your limiting ingredient. Multiply the given amount of that ingredient by a ratio of the needed ingredient over the given ingredient from the original recipe.

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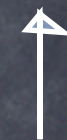
↓ ↓

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HCl is limiting reagent.

Analyze:

Given:

0.164 mol HCl

0.206 mol Mg

Needed:

0.082 mol Mg

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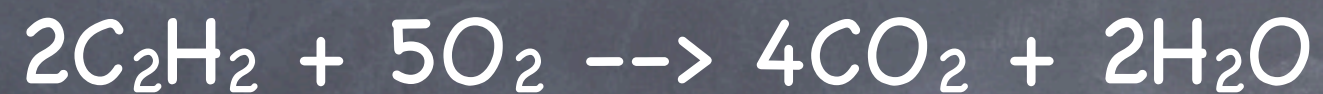
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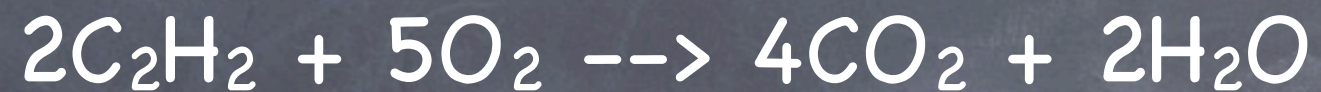
Needed:

0.082 mol Mg

We have more Mg than is needed, so Mg is in excess. Mg is the excess reagent. Therefore, HCl is the limiting reagent.

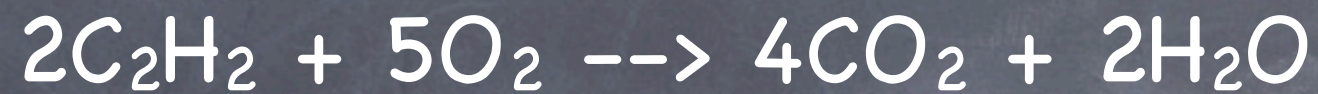


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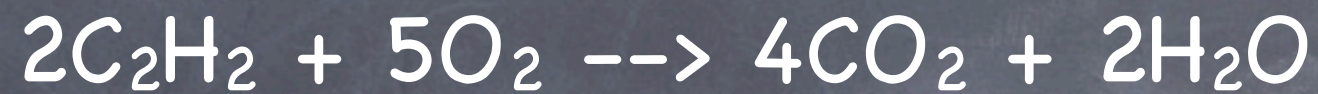
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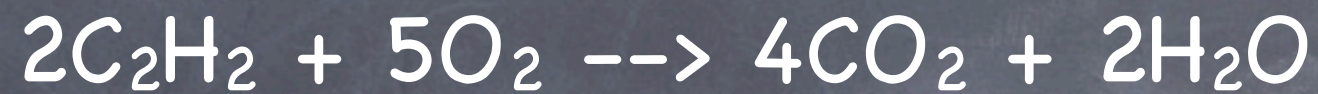


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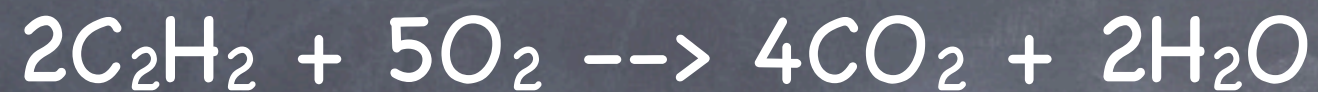


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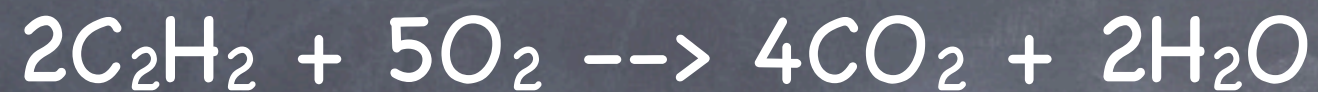


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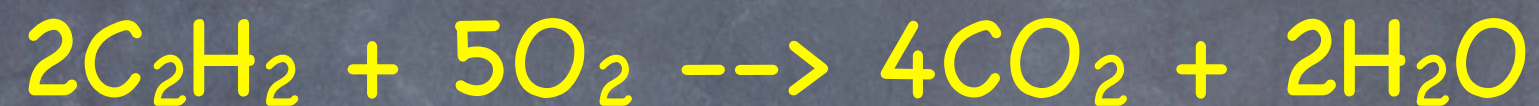
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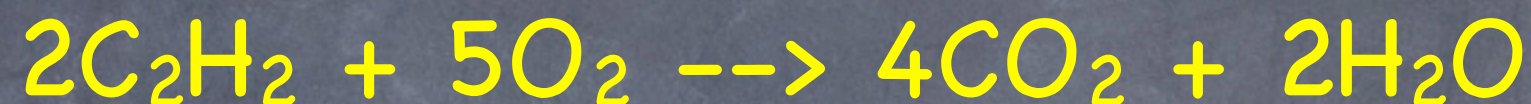
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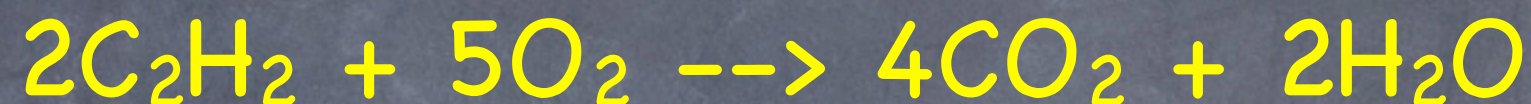


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$$2.40 \text{ mol } \text{C}_2\text{H}_2 \times \frac{2 \text{ mol } \text{H}_2\text{O}}{2 \text{ mol } \text{C}_2\text{H}_2} \times \frac{18.0\text{g}}{1 \text{ mol}} =$$

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Now, complete #45, 46, and 47 on p. 379, and show your answers to the teacher. When you get all answers correct, proceed to the next page.

Do your work here:

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46. Convert given reactants to moles, multiply by correct mole ratio, compare needed reactants to given reactants.





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$$\text{c. } 5.3 - 4.5 = 0.8 \text{ mol Cl}_2$$

In groups of 2 or 3, work on the 12 multiple choice questions attached to the end of this packet. When your group finishes, take your papers up to the teacher to be corrected. You may correct your work and continue working up until 10 minutes before the end of the period. At that point, your paper must be graded by the teacher.